

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number
WO 2004/017575 A3

(51) International Patent Classification⁷: **H04L 12/56**

SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/GB2003/003519

(22) International Filing Date: 13 August 2003 (13.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0218968.6 14 August 2002 (14.08.2002) GB

(71) Applicant (for all designated States except US): **TDK
SYSTEMS EUROPE LTD** [GB/GB]; 126 Colindale
Avenue, Colindale, London NW9 5HD (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **TAILOR, Mahendra**
[GB/GB]; 17 Bassingham Road, Wembley, Middlesex
HA0 4RJ (GB).

(74) Agents: **FAULKNER, Thomas, John et al.**; fJ Cleveland,
40-43 Chancery Lane, London WC2A 1JQ (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

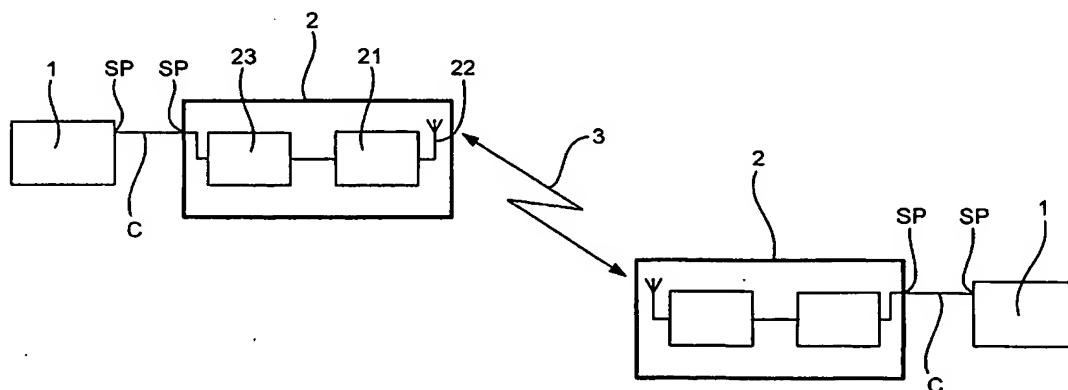
- as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES,
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO
patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT,
RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

[Continued on next page]

(54) Title: **BLUETOOTH SERIAL ADAPTERS**



(57) Abstract: A Bluetooth serial adapter comprising a Bluetooth connection module (21) for conducting Bluetooth communication with another Bluetooth enabled device, a serial connector SP allowing connection of a serial cable between the adapter and a device having a serial port, and a serial to Bluetooth interface (23) arranged for: receiving serial connection control commands input via the serial connector; mapping received serial connection control commands to Bluetooth connection control events; and outputting the so determined Bluetooth connection control events to the Bluetooth connection module. The interface (23) may be implemented by making use of a virtual machine provided on the Bluetooth chip.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
12 August 2004

INTERNATIONAL SEARCH REPORT

national Application No
PCT/GB 03/03519A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 093 272 A (SONY CORPORATION) 18 April 2001 (2001-04-18) paragraph '0017! - paragraph '0049! paragraph '0056! - paragraph '0062! paragraph '0068! - paragraph '0081! ----- -/-	1-14

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

21 May 2004

Date of mailing of the international search report

01/06/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Behringer, L.V.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/03519

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>PAGES 171-196,227-250: "Wireless connections made easy"</p> <p>BLUETOOTH SPECIFICATION VERSION 1.1, vol. 2, 22 February 2001 (2001-02-22), XP002281062</p> <p>page 178, paragraph 2.1 "PROFILE STACK"</p> <p>page 179, paragraph 2.3 "USER REQUIREMENTS AND SCENARIOS"</p> <p>page 181, paragraph 3.1.1 "Establish link and set up virtual serial connection"</p> <p>page 182, paragraph 3.1.3 "Register Service record in local SDP database"</p> <p>page 184, paragraph 4 "RFCOMM INTEROPERABILITY REQUIREMENTS" - page 185, paragraph 4.3 "REMOTE PORT NEGOTIATION"</p> <p>page 237, paragraph 2.4 "PROFILE FUNDAMENTALS"</p> <p>page 238, paragraph 3.2 "DATA CALLS"</p> <p>page 239, paragraph 4 "DIALLING AND CONTROLLING INTEROPERABILITY REQUIREMENTS"</p> <p>- page 242, paragraph 4.3 "ESCAPE SEQUENCE"</p>	1-14
A	<p>N.N.: "CSR offers new small footprint software for embedded Bluetooth products"</p> <p>CSR PRESS RELEASE, 'Online!'</p> <p>6 March 2002 (2002-03-06), XP002281063</p> <p>CAMBRIDGE, UK</p> <p>Retrieved from the Internet:</p> <p>URL: http://www.csr.com/pr/pr057.htm</p> <p>'retrieved on 2004-05-19!'</p> <p>the whole document</p>	8
A	<p>KRIS FLEMING ET AL: "Architectural Overview of Intel's Bluetooth Software Stack"</p> <p>INTEL TECHNOLOGY JOURNAL,</p> <p>5 May 2000 (2000-05-05), pages 1-10, XP002200582</p>	

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No
PCT/GB 03/03519

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1093272	A	18-04-2001	CN 1304266 A	18-07-2001
			EP 1093272 A2	18-04-2001
			JP 2001186214 A	06-07-2001
<hr/>				